IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of	§	**Art Group: 3672**
	§	
Hall, David R., et al	§	**Examiner: Fuller, David Edward**
	§	
Serial No.: 10/710,639	§	
	§	
Filed: July 27, 2004	§	**Docket No.: 66.0066**
	§	
For: Biased Insert for Installing Data Transmission Components in Downhole Drilling Pipe	§	

VIA ELECTRONIC SUBMISSION

September 22, 2006

Honorable Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

This paper is timely submitted in response to the Patent and Trademark Office Action mailed May 10, 2006 for which the shortened – statutory period for response *plus a two month extension for time* is set to expire on October 10, 2006. Reconsideration of the application in view of the following amendments and remarks is respectfully requested.

AMENDMENT

Please amend the above-identified application as follows:

IN THE SPECIFICATION:

Please amend paragraph [0035] as follows:

[0035] Referring to FIG. 2, in selected embodiments, a transmission element assembly 33 may include a first transmission element 24a mounted in the pin end 12 of a downhole component 10, and a second transmission element 24b mounted in the box end 14 of a downhole component 10. Each of these transmission elements 24a, 24b may be operably connected by a cable 26a, such as electrical wires, coaxial cable, optical fiber, or like transmission media. Each of the transmission elements 24 may include an exterior annular housing 28. The annular housing 28 may protect and retain components or elements within the transmission elements 24a, 24b, 24c, and 24d. The annular housing 28 may have an exterior surface shaped to conform to a recess milled, formed, or otherwise provided in the pin 12 or box end 14 of a downhole component 10.

Please amend paragraphs [0037] and [0038] as follows:

[0037] As is illustrated in FIG. 2, a transmission element 24b located on a first downhole component 10 may communicate with a transmission element 24c located on a second downhole component 10. Electrical current transmitted through a coil 32 in a first transmission element 24b may create a magnetic field circulating around the conductor 32. ~~A second t~~Transmission element 24c may be positioned proximate ~~the first~~ transmission element 24b such that the magnetic field is detected by a coil 32 in the transmission element 24c.

[0038] In accordance with the laws of electromagnetics, a magnetic field circulated through an

electrically conductive loop induces an electrical current in the loop. Thus, an electrical signal transmitted to ~~a first~~ transmission element 24b may be replicated by ~~a second~~ transmission element 24c. Nevertheless, a certain amount of signal loss may occur as a signal is transmitted between the transmission elements 24b, 24c. For example, signal loss may be caused by air or other gaps present between the transmission elements 24b, 24c, or by the reluctance of selected magnetic materials. Thus, apparatus and methods are needed to reduce, as much as possible, signal loss that occurs between transmission elements 24b, 24c. This may be accomplished, in some instances, by minimizing the gap between the transmission elements 24b, 24c. This may improve the signal coupling as well as keep debris or other substances from being introduced between the transmission elements 24. Thus, apparatus and methods are needed to minimize, as much as possible, the gap between transmission elements 24b, 24c.

IN THE CLAIMS:

1. (Currently Amended) An apparatus for retrofitting a section of drill pipe with a transmission line, the apparatus comprising:

an insert for insertion into at least one of the box end and the pin end of a section of drill pipe, wherein the insert comprises a mount portion and a slide portion;

a transmission element mounted in the slide portion; and

a biasing element for effecting a bias between the mount portion and the slide portion;~~.~~

wherein the insert is inserted into the inside diameter of a section of drill pipe and narrows a central bore of the drill pipe.

2. (Canceled)

3. (Original) The apparatus of claim 1, further comprising a channel traveling through at least one of the slide portion and the mount portion to accommodate a transmission line.

4. (Original) The apparatus of claim 3, further comprising a transmission line routed through the channel, wherein the transmission line is configured to flex when the slide portion slides with respect to the mount portion.

5. (Currently Amended) The apparatus of claim 1, wherein the biasing element is selected from the group consisting of an elastomeric material, a spring, and compressed gas~~, or a combination thereof~~.

6. (Original) The apparatus of claim 1, wherein: the slide portion is substantially cylindrical in shape; and the slide portion is characterized by an annular mating surface configured to contact a corresponding annular mating surface.

7. (Original) The apparatus of claim 6, wherein: the transmission element is substantially annular; and the transmission element is mounted in the annular mating surface.

8. (Original) The apparatus of claim 1, further comprising a stop mechanism adapted to prevent the slide portion from sliding more than a specified distance with respect to the mount portion.

9-20. (Canceled)

21. (New) The apparatus of claim 1, wherein the insert is smoothed.

22. (New) The apparatus of claim 1, wherein the insert comprises a flange adapted to sit against a shoulder of the drill pipe.

23. (New) The apparatus of claim 1, wherein the insert is radially expandable.

24. (New) The apparatus of claim 1, wherien the insert comprises a tapered end that includes one of more gaps to allow for expansion.

25. (New) The apparatus of claim 1, wherein the apparatus comprises a plurality of baising elements opposed from one another between the slide and mounting portions.

26. (New) An apparatus for retrofitting a section of drill pipe with a transmission line, the apparatus comprising:

a pin end insert comprising a first transmission element, wherein the pin end insert is insertable into an inner diameter of the the pin end of a section of drill pipe and narrows a central bore of the drill pipe; and

a box end insert comprising a second transmission element,

wherein the box end insert is insertable into a shoulder of the box end of a section of drill pipe.

27. (New) The apparatus of claim 26, wherein at least one of the pin end insert and the box end insert further comprises a mount portion and a slide portion.

28. (New) The apparatus of claim 26, further comprising a biasing element for effecting a bias between the mount portion and the slide portion.

29. (New) The apparatus of claim 27, wherein at least one of the first and second transmission elements is mounted to the slide portion.

30. (New) The apparatus of claim 27, further comprising a channel traveling through at least one of the slide portion and the mount portion to accommodate a transmission line.

31. (New) The apparatus of claim 29, further comprising a transmission line routed through the channel, wherein the transmission line is configured to flex when the slide portion slides with respect to the mount portion.

REMARKS

Claims 2 and 9-20 have been canceled without prejuduce.

Claims 1 and 5 have been amended without prejuduce.

New Claims 21-31 have been added.

The Office requested a new oath or declaration in compliance with 37 CFR 1.67(a) because the original declaration was not executed in accordance with either 37 CFR 1.66 or 1.68. A new properly executed declaration that has been signed by all of the inventors is attached herein.

The Office objected to the drawings because reference character 24d is included in the drawings, but not mentioned in the specification. Paragraph [0035] in the specification has been amended to mention reference character 24d. No new matter has been added.

The drawings were also objected to because reference characters 24a and 24b have both been used to designate the first transmission element. The specification has been amended to correct this error.

The drawings were also objected to because reference characters 24b and 24c have both been used to designate the first transmission element. The specification has been amended to correct this error as well.

In light of the amendments to the specification, the Applicants now believe that the objections to the drawings are now addressed. Accordingly, Applicants respectfully request that these objections be widthdrawn.

The Office objected to claim 5, because it was not constructed as a proper Markush claim. Claim 5 has been amended now, as suggested by the examiner.

The Office rejected claims 1, 3-5, and 8-20 under 35 U.S.C. 102(b) as being anticipated by Fontenot (US 3,518,609). Claim 1 has been amended to include "wherein the insert is inserted into the inside diameter of a section of drill pipe and narrows a central bore of the drill pipe." The Applicants submit that since Fontenot does not describe an insert being inserted into the inside diameter of a section of drill pipe that claim 1 is now allowable. Since claims 3-5 and 8 depend from now allowable base claim 1, the Applicants respectfully submit that claims 3-5 and 8 are also allowable. Claim 9-20 have been canceled rendering their rejection moot.

The Office rejected claims 2, 6, and 7 under 35 U.S.C. 103(a) as being unpatentable over Fontenot in view of Hall (US 6,392,317). Claim 2 has been canceled and its limitations have been included in amended claim 1. Amended claim 1 also has the limitation that the insert narrows a central bore of the drill pipe, which is not disclosed in Fontenot or Hall. Fontenot teaches an insert is placed in a shoulder portion of a wall of the pipe (Col. 3, lines 35-43). Hall does not disclose an insert that narrows a central bore of drill pipe. Hall teaches that the rings are deployed within grooves within the internal shoulder or the counter bore portion of the box end tool joint and on the face of the pin end tool joint (Col. 4, lines 6-8). Hall only depicts harnesses deployed in grooves that do not narrow a central bore of the drill pipe. Hall discloses several embodiments in the blow-ups of Fig. 6, all of which depict harnesses in grooves or seperated from a central bore via a liner 12. (Col. 5, lines 1-21).

Since the feature of narrowing the bore is not disclosed by either Fontenot or Hall, the Applicants believe that amended claim 1 is now allowable. Since claims 6 and 7 depend from

now allowable claim 1, the Applicants respectfully submit that claims 6 and 7 are also now allowable.

New claims 21-31 have been added. Since new claims 21-25 depend from now allowable base claim 1, the Applicants respectfully submit that new claims 21-25 are also now allowable. New claim 21 has supported in paragragph [0049]; new claim 22 has support in paragraph [0056]; new claim 23 has support in paragraph [0058]; new claim 24 also has support in paragragph [0058]; and claim 25 has support in paragraph [0045]. No new matter has been added.

New independent claim 26 also includes that an insert is insertable into an inner diameter of the the pin end of a section of drill pipe and narrows a central bore of the drill pipe which is not disclosed by either Fontenot or Hall as discussed above. Since claims 27-31 depend from allowable base claim 26, the Applicants respectfully submit that claims 27-31 are also allowable.

In view of the arguments and amendments made herein, Applicants respectfully submit that the application is now in condition for allowance. Accordingly, Applicants respectfully request that a timely Notice of Allowance be issued in this case.

Claims 2 and 9-20 have been canceled and claims 21-31 have been added, making a net loss of two claims. Since there is no net increase in the total number of claims, nor in the number of independent claims, no additional fees are due for the new claims.

As authorized in the EFS submission under which this document is being filed, please charge Deposit Account No. 180584 in the amount totaling $580. Of this amount, $450 is for the fee required under 37 CFR 1.17(a)(2) for a two month extension for time, and $130 is for the fee required under 37 CFR 1.16(f) for a new oath/declaration. It is believed that there are no other fees due at this time. However, the commissioner is hereby authorized to charge any fees which

may be required at any time during the prosecution of this application without specific authorization, or credit any overpayment, to Deposit Account 180584. If there are any questions concerning the above, please contact the undersigned at (281) 878-5658.

/Jeffery E. Daly/

Electronically signed by Jeffery E. Daly on 09/22/2006

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I hereby certify that this correspondence is being deposited with the United States Postal Service as First Class Mail in an envelope addressed to: Commissioner for Patents, Alexandria VA 22313-1450 or by facsimile or electronic transmission to the U.S. Patent and Trademark Office on the date shown below.

9/22/06	*/Jeffery E. Daly/*
Date	Electronic Signature